

ABSTRACT OF THE DISCLOSURE

A software development platform, used to develop software applications substantially free of the need to write code. The platform includes a visualizable computer executable modeling language for the definition of software solutions. The platform also includes a visual modeling system comprising a visual modeling tool for users to develop software solutions using the modeling language, and a runtime engine software program that automatically executes the defined software solutions. The visualizable computer executable modeling language system enables defining each application by a set of: process models, each of which may contain any number of sub process model; input and output slots; data models, each of which may contain any number of sub data models; and flow rules applicable to connect pairs of slots, data models and sub-data models, thereby defining both data flow and process flow, wherein the sets of process models, slots, data models and flow rules are arranged in a structural hierarchy conforming to a set of rigid composition rules.